

REMARKS

Claims 1-31 are pending in the application. Claims 1-31 were rejected.

Claim 1 was rejected under 35 USC 102(b) as being allegedly anticipated by Pereira, US Patent No. 5,781,726.

Claims 5-9, 12-20 and 23-31 were rejected under 35 USC 103(a) as being allegedly unpatentable over Pereira in view of Dervin, US Patent No. 6,952,766.

Claims 2-4 and 10-11 were rejected under 35 USC 103(a) as being allegedly unpatentable over Pereira in view of Griffin, US Patent No. 6,889,263.

Claims 21 and 22 were rejected under 35 USC 103(a) as being allegedly unpatentable over Pereira in view of Dervin, and further in view of Griffin.

The rejections are respectfully traversed, for the reasons cited below.

Claims 1-31: “point to point architecture,” “interconnection controller,” “processors”

The Examiner rejected independent claim 1 under 35 U.S.C. 102(b) as being allegedly anticipated by Pereira. The Examiner rejected independent claims 12 and 23 under 35 U.S.C. 103(a) as being allegedly unpatentable over Pereira in view of Dervin. It is respectfully submitted that Pereira either alone or in combination with Dervin does not teach or suggest all of the recitations of the independent claims. Independent claims including claims 1, 12, and 23 recite “... a first cluster including a first plurality of processors and a first interconnection controller, the first plurality of processors and the first interconnection controller in communication using a point to point architecture” and “a second cluster including a second plurality of processors and a second interconnection controller, the second plurality of processors and the second interconnection controller in communication using a point-to-point architecture...” The Examiner relies on Pereira to teach or suggest these recitations.

Pereira notes that the “basic architecture of a system implementing the present invention is shown in FIG. 5.” (Column 7, lines 44-45). Figure 5 features several end stations 204, 205 and an edge device (central node 200). The Office Action identifies the end stations 204 and 205 as the “plurality of processors” and central node 200 as the “interconnection controller” (see Office Action, page 2). The Office Action further refers to column 2, lines 7-25 and column 6,

lines 11-19 to demonstrate that the end stations and the edge device are “in communication using a point to point architecture.”

Column 2, lines 7-25 describes devices connected through a local area network. Column 6, lines 11-19 elaborates upon the communication medium between the central node 200 and another edge device. Figure 5 shows a ring connecting the central node 200 and the end stations 204 and 205. The relevant portion of the specification states, “[a] local area network 203 is connected to the central node 200. In this example, the local area network 203 is represented by a ring. Other local area network configurations can be utilized by this system.” (column 7, lines 47-50).

Pereira describes a ring structure linking the end stations and refers to a local area network. But neither a local area network nor a ring formation necessarily constitutes a “plurality of processors and ... [an] interconnection controller using a point to point architecture.” The ring structure in Figure 5, in fact, implies that the end stations and central node 200 are connected in a circular chain, in which the central node (identified in the Office Action as an “interconnection controller”) may lack a direct connection to a specific end station (identified in the Office Action as a “controller.”) Furthermore, conventional local area networks such as Ethernet networks and Token Ring networks do not use a point to point architecture.

Figure 5 does show curved lines, such as the one labeled LSXA, between the edge device and each of the end stations X and Y. Pereira, however, states in column 8, lines 14-17, that “the session between station X and station A is divided into a link session LSXA between the end station X and central node.” Such lines thus represent software-based relationships rather than physical point to point links.

Figure 5 and its accompanying description in Pereira also do not establish that the end stations, as maintained in the Office Action on page 2, do in fact constitute a “plurality of processors.” The end stations of Pereira are not clearly defined. They are, according to Figure 5, connected via a local area network. A prior art example utilized “display terminals” (column 2, line 29) in place of end stations. Another example described the use of an “IBM end station, such as a requestor 127, running OS/2 or DOS.” (column 3, lines 26-27). The end stations seem to refer to devices, such as PCs or monitors.

PCs may contain processors, but they are “in communication [with a interconnection controller] using a point-to-point architecture.” A typical end station or device in a LAN, for example, may house a processor, but the processor normally would not be linked to an external

interconnection controller or central node. Typically devices connect to a LAN utilizing an intervening mechanism, such as a network interface card and/or a bus.

Pereira seems to utilize PCs rather than processors and does not directly connect its central node to each of the end stations. As a result, it cannot provide a “plurality of processors and ... [a] interconnection controller in communication using a point-to-point architecture.” Claims 1-31 all involve processors and an interconnection controller in communication using a point-to-point architecture, and thus it is respectfully submitted that Pereira does not anticipate those elements of the claims.

Claims 1-11: “enabled or disabled”

Claim 1 includes the following elements: “a first cluster including ... a first interconnection controller ... a second cluster including ... a second interconnection controller ... wherein polling for a link from the first interconnection controller to the second interconnection controller can be enabled and disabled by configuring the first interconnection controller.” The Office Action refers to “smart polling” as the feature in the Pereira reference that anticipates the phrase, “wherein polling for a link from the first interconnection controller to the second interconnection controller can be enabled or disabled ... “ The Office Action further references column 4, lines 20-56 and column 6, lines 20-49 (see Office Action, page 3.)

Column 4, lines 20-56 describe a “method [that] optimizes and reduces the polling traffic” between two edge devices, which are identified by central node 200 and leaf node 202 in Figure 5. Column 6, lines 20-49 refers to that method as a “smart polling algorithm used between intermediate devices in a network.” The abstract notes that the smart polling algorithm is used within the edge devices to “optimize and reduce the polling traffic needed to maintain the connection oriented sessions across a common link between edge devices.”

The Examiner uses the above citations to anticipate the above elements of claim 1 under 35 USC 102(b). Similar reasoning is used in the Office Action to reject claims 2-11 under 35 USC 103(a).

It is respectfully submitted that the smart polling algorithm, as described in Pereira, does not anticipate the claim elements cited in the first paragraph of this section. The smart polling algorithm does “optimize and reduce the polling traffic,” but it cannot result in “polling ... [that] can be enabled and disabled,” as required by the language of claims 1-11.

The smart polling algorithm cannot result in polling that is “disabled” because, under the algorithm, the intermediate device does not stop polling. An edge or intermediate device in Pereira, identified as the “interconnection controller” in the Office Action, initially allows normal polling on all sessions passing through it. The edge devices apply smart polling to a session under certain circumstances. As noted in column 6, lines 25-28, edge devices “detect ... those sessions which are the data ready transfer state ... and performing normal polling algorithms ... All of these sessions are put in a smart polling session.”

Once the sessions are put into smart polling sessions, the polling for those sessions is not “disabled” by the smart polling algorithm. Instead, all of the smart polling sessions are allowed to poll, but only one at a time. As noted in column 6, lines 28-34, “For those members of a set of sessions that are in the smart polling mode, the algorithm detects one of these sessions to do the polling for all of the sessions between the two intermediate devices. A different session is used for this purpose in a round robin fashion for each time period. This ensures that all of the sessions get polling coverage over a period of time.”

Even when the smart polling algorithm itself terminates, polling is not “disabled.” Column 6, lines 37-43 states, “When one of the sessions fails in the smart poll ... that session is put in the normal polling. When it is the normal polling mode, it does not participate in smart polling until a valid response to its own normal poll is received.”

Pereira therefore discloses an invention that allows for a different form of polling by the intermediate device, but does not allow for “polling for a link from the first interconnection controller to the second interconnection controller [to be] be enabled and disabled by configuring the first interconnection controller.” Polling under Pereira from the intermediate device may shift from smart polling to normal polling and back again, but Pereira does not contemplate the “disabling” of polling.

Since polling from the intermediate device is not “disabled” or “enabled,” it is respectfully submitted that the disclosure in Pereira does not anticipate those elements of claims 1-11. As a result, applicants request that the rejections of claims 1-11 under 35 USC 103(a) and 35 USC 102(b), as applicable, be lifted.

**Claims 12-31: “establishing a link layer protocol on a connection
between the first and second interconnection controllers”**

The Examiner rejected independent claims 12 and 23 under 35 USC 103(a) as being allegedly obvious over Pereira in view of Dervin. It is respectfully submitted that Pereira either alone or in combination with Dervin does not teach or suggest all the recitations of the independent claims. Claim 12 includes the following elements: “[a] method for introducing a cluster of processors, the method comprising ... configuring a first interconnection controller ... to poll for the presence of a second interconnection controller ... establishing a link layer protocol on a connection between the first and second interconnection controllers.” Independent claim 23 includes the following elements: “[a] computer system, comprising: means for configuring a first interconnection controller ... to poll for the presence of a second interconnection controller ... means for establishing a link layer protocol on a connection between the first and second interconnection controllers.” Applicants will focus their analysis on the common phrase, “establishing a link layer protocol on a connection between the first and second interconnection controllers.”

The Examiner relies upon Pereira to teach or suggest the above phrase. To support its rejection, the Examiner referred to column 6, lines 20-29 in Pereira. These lines again refer to the smart polling algorithm. The lines state that the smart polling algorithm “detect[s] ... those sessions which are the data transfer ready state, for the LLC2 environment, and performing the normal polling algorithms.” (See column 6, lines 25-28).

Another distinction between the claimed invention and the disclosure in Pereira is that the smart polling algorithm needs a pre-existing link layer connection to operate, instead of establishing one itself. Column 12, lines 59-64 in Pereira states, “[f]or a session to be placed in the smart polling state; first, the port must be up; second it must be in the normal polling state; third, LLC2 session activity is present on the port ...”

Because the smart polling invention of Pereira does not configure the interconnection controller to establish a link layer protocol, but rather depends on the protocol being already established, Pereira does not anticipate the claim elements mentioned above. It is therefore respectfully submitted that the rejections of claims 12-31 be lifted.

Conclusion

Applicant's Attorney believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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